

ABSTRACT OF THE DISCLOSURE

A rechargeable lithium storage cell includes a positive electrode, whose electrochemically active material includes one or more oxides of a transition metal, and a negative electrode, consisting of a conductive support and an active layer containing a binder and an electrochemically active material. The binder is a polymer containing no fluorine. The electrochemically active material is a mixed oxide of lithium and titanium with the general formula  $\text{Li}_x\text{Ti}_y\text{O}_4$  in which  $0.8 \leq x \leq 1.4$  and  $1.6 \leq y \leq 2.2$ . The non-fluorinated polymer is preferably soluble in water or capable of forming a stable emulsion in suspension in water. The binder preferably contains an elastomer, especially an acrylonitrile/butadiene copolymer and/or a cellulose compound such as carboxymethylcellulose.